

6672/USSN 10/566,629
Group Art Unit 1791

REMARKS

Applicants have considered the outstanding official action. It is respectfully submitted that the claims are directed to patentable subject matter as set forth below.

Claim 56 is rejected under 35 U.S.C. §112, second paragraph, as being indefinite on the basis set forth at page 2 of the official action. Applicants have amended claim 56 to clarify that the background embossing is provided by the third series of protuberances. Claim 56 is submitted to be definite. Applicants respectfully request withdrawal of the rejection under 35 U.S.C. §112.

The sole rejection based on art is of claims 44, 45, 51-62 and 64 under 35 U.S.C. §103(a) as being obvious over WO 99/44814 (Biagiotti) in view of U.S. Patent No. 5,339,730 (Ruppel).

Applicants submit that it would not be obvious to combine Biagiotti and Ruppel in a manner to provide applicant's claimed method since they are directed to different methods and in view of the specific teachings of Ruppel.

In particular, Ruppel teaches gluing and printing on two separate plies rather than both on a single ply. The

Examiner asserts that there are only two alternatives, i.e., to print and glue one and the same ply, or to print one ply and glue the other ply. Applicants submit that this is not an applicable choice when the teachings of Ruppel as a whole are considered. No reason to modify Ruppel such that printing and gluing is performed on the same ply is taught or suggested as further described below.

Starting with the teachings of the primary reference, Biagiotti, one skilled in the art would not have any reason to consider Ruppel to obtain useful teaching therefrom which would provide applicants' claimed method. Applicants submit that the Examiner's approach is based on hindsight and looking at the teaching of prior art only to the extent necessary to build a bridge from Biagiotti to applicants' claimed method. The teachings of the prior art must be considered as a whole and not in isolation.

Ruppel addresses problems which are different from those addressed by the claimed method. See for example column 1, lines 10-21 of Ruppel, wherein a technique to which Ruppel wants to provide an improvement is that of a conventional printing process where printing takes place on the outside of a two-ply product by a printing system upstream or downstream of the embossing system. Ruppel states that this known technique has three drawbacks which

6672/USSN 10/566,629
Group Art Unit 1791

Ruppel seeks to address, i.e., (1) that the printing ink is located on the product's outside and thus will be in contact with the outside when in use; (2) it is impossible to synchronize embossing and printing; and (3) when printing before embossing, the former interacts with the latter resulting in the incurring of degraded definition.

Another known technique which Ruppel wants to improve upon (see column 1, lines 22-25) involves products of the nested type manufactured using gluing systems of an embossing unit where a dyeing glue is used. This technique according to Ruppel also suffers drawbacks (column 1, lines 26-33), i.e., (1) dependency of the printing pattern on the embossing pattern (i.e., the printing and embossing pattern are coincident); (2) dependency of the printing denseness on gluing; (3) and cost. In order to solve the above problems (see column 1, lines 36-45), Ruppel describes directly printing one ply on an embossing roller using one or more printing systems mounted on the embossing system and associating this printed ply with another embossed ply. Applicants note that Ruppel teaches expressly to print a first ply, emboss a second ply which must be different from the printed first ply; and then glue the two plies together. It is self-evident that what is suggested by the Examiner, i.e., to combine Ruppel with Biagiotti but modifying the

teaching of Ruppel such that printing and embossing are performed on the same ply, is inconsistent with the teaching of Ruppel. Nothing is present in the teaching of either Biagiotti or Ruppel which would lead to changing the specific teaching of Ruppel by providing printing and gluing on the same ply, since this is the opposite of what Ruppel teaches. In particular, Ruppel does not teach or suggest to providing two different embossings on one ply for receiving application of printing and glue, respectively (see Figures 1 and 5, first ply V_1 having P_1 and P_2 with S and C, of the captioned application).

An additional problem addressed by Ruppel is, when printing before embossing, avoiding the degraded definition incurred when the printing and embossing interacts. If printing and embossing are performed on the same ply, degradation is the consequence. Thus, the Examiner's assertion to modify the teaching of Ruppel to have printing and embossing on the same ply would be inconsistent with the teaching of Ruppel since it leads to a problem sought to be avoided. To avoid this degradation, further teaching is required and neither Biagiotti nor Ruppel provide such. Applicants' claimed method, however, does through the requirement of the second series of protuberances which have

6672/USSN 10/566,629
Group Art Unit 1791

a greater height and lesser density as compared to the first series of protuberances on the same ply.

Ruppel also wants to solve the problem of synchronizing embossing and printing. This is achieved according to Ruppel in two different ways. First, in the case of tip-to-tip embossing, by printing the tips of one ply and gluing the tips of the other ply while the two plies are engaged on the two embossing cylinders. Since the two embossing cylinders are phased tip-to-tip, this will result in a synchronization between printing and embossing. Secondly, in the case of nested embossing, by printing the tips of a first ply and gluing the tips of the other ply while the two plies are engaged on the two embossing rollers, and then meshing the tips of one ply in the valleys of the other ply, i.e., between the tips of the other ply. In both cases it is mandatory to apply glue on one ply and print on the other ply. A different approach would not work.

One skilled in the art would not have considered changing the teaching of Ruppel by combining printing and embossing on the same web, since this would be inconsistent with the need for synchronizing printing and embossing, an identified purpose in Ruppel. Thus, contrary to the Examiner's assertion, there are not two choices (i.e., to

print and emboss the same ply or different plies) since changing from printing and gluing separate plies versus the same ply goes against the purposes sought to be achieved by Ruppel and, accordingly, are inconsistent with the teachings of Ruppel. In other words, the second choice is excluded by the teaching of Ruppel. Applicants submit that the teaching of Ruppel is inconsistent with the teaching of Biagiotti since Biagiotti's method and device would not allow a combined printing and embossing effect on a two-ply web in the manner described by Ruppel.

The object of the captioned application is to improve on the method described in Biagiotti (see page 3, lines 11-12). This is achieved by providing a background embossing and a decorative embossing on the same ply; and printing the tips of the micro-embossing prior to performing the decorative-embossing. The purpose of this is to define a colored texture effect on the embossed ply (see the captioned application, page 3, lines 3-4). Only a small quantity of ink is required to obtain the effect of a substantially uniform coloring of the entire ply surface. Applicants submit that synchronization between printing and embossing is not required by the claimed method. The problem of synchronizing printing and embossing is not at

issue with the claimed method. Avoiding deterioration of printing due to the superposition of printing and embossing is also not an issue with the claimed method. Applicants' claimed method provides embossing performed on a printed area. Since these two main problems are what Ruppel addresses, one skilled in the art would not have considered Ruppel as a source of possible teaching to improve Biagiotti in order to solve the problem addressed by applicants' claimed method. As set forth above, the problems of synchronization and of avoiding deterioration of printing by superimposing thereon the embossing effect is solved by Ruppel by printing one ply and embossing another separate ply, and additionally by printing and embossing the two different plies while the plies are engaged with two phased embossing rollers. These conditions are mandatory based on the teachings of Ruppel taken as a whole.

Such conditions are also inconsistent with the applicants' claimed method. The claimed method serves to provide a textile effect by coloring background embossing of a ply which is subsequently subjected to further embossing. This is achieved by an approach which is quite the opposite of the teaching of Ruppel, i.e., printing and embossing are performed on the same ply. Printing and embossing are not

phased, but rather are performed in sequence on the same ply in a random manner.

According to Ruppel, following the technique described, "there is synchronization between the printing pattern and the embossing pattern procedures, making it possible, for instance, to emphasize an embossing pattern" (see column 2, lines 43-46). Further with regard to Ruppel, "the method of the invention results in improved independence of the print pattern from the embossing pattern and hence in the printing being independent from the glue sizing, so that the product's print intensity can be varied" (see column 2, lines 49-54). These results cannot be achieved with Biagiotti; are not required, desired or achieved with applicants' invention as claimed; and are inconsistent with the modifications asserted by the Examiner, i.e., to print and emboss one and the same ply, thus departing from the teachings of Ruppel. As noted above, applicants' provide a background coloring effect on a ply which is subsequently embossed. This is unrelated to the problems underlying the teachings of Ruppel and could not be achieved with the teachings of Ruppel. Thus, claim 44 is novel and non-obvious over Ruppel and Biagiotti.

Applicants have added new independent claim 91 to provide a further defined method. Claim 91 is a combination of claims 44, 51 and 53 and, thus, the limitations have been previously considered by the Examiner and are properly considerable at this time. Claim 91 provides that the background pattern is a micro-embossing pattern. The object of the claimed method is different from Ruppel wherein applicants' claimed method provides a micro-embossed colored pattern resulting in a novel effect of an embossed web material which appears to have a substantially uniform color on the entire surface thereof, with a textile texture. The teachings of Ruppel do not provide a method to achieve such structure. Ruppel teaches having a printed pattern which is identical to or complementary to that of the embossing pattern. This is necessary because the embossed and printed patterns are arranged either tip-to-tip or nested. The background micro-embossed printed pattern is combined with colored decorative motifs embossed afterwards. As set forth above, Ruppel is directed to avoiding use of colored glue since the decorative pattern is to be independent of the glue. This can only be achieved if printing is not obtained by means of colored glue. New independent claim 91 contains a limitation which is entirely inconsistent with Ruppel and,

6672/USSN 10/566,629
Group Art Unit 1791

therefore, is not obvious from combining Ruppel and Biagiotti.


Accordingly, applicants submit that the combination of Biagiotti and Ruppel does not render the claimed method obvious within the meaning of 35 U.S.C. §103. Withdrawal of the §103 rejection is respectfully requested.

If the Examiner believes an interview would be helpful in placing the application in condition for allowance, please call. The undersigned is available for an interview.

Reconsideration and allowance of the application is respectfully urged.

Respectfully submitted,

MAURO GELLI ET AL

By 

Mary J. Breiner, Attorney
Registration No. 33,161
BREINER & BREINER, L.L.C.
P.O. Box 320160
Alexandria, Virginia 22320-0160

Telephone: (703) 684-6885